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S. C. PUBLIC SERVICE COMMISSION
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DIRECT TESTIMONY

OF

GENE G. SOULT

ON BEHALF OF

SOUTH CAROLINA ELECTRIC & GAS COMPANY

DOCKET NO. 1999-002-E

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UTILITIES DEPARTMENT

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION
WITH SOUTH CAROLINA ELECTRIC AND GAS COMPANY
(SCE&G).

A. Gene G. Soult, 111 Research Drive, Columbia, South Carolina. I am
employed by SCE&G as General Manager of Fossil & Hydro Technical
Services.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND
PROFESSIONAL EXPERIENCE.

A. I have a B. A. S. in Management from Troy State University of Troy,
Alabama. I was employed by SCE&G in June, 1981, as a Control Room
Foreman at V.C. Summer Nuclear Station. In October, 1981 I became a Shift
Supervisor at V.C. Summer Nuclear Station and continued to progress through
the V.C. Summer management chain to ultimately reside as the General
Manager, Nuclear Plant Operations in 1991. In 1992 I assumed the position of

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1 General Manager, Quality for SCE&G. In 1993 I assumed the position of
2 Manager, Cope Generating Station and maintained that position through
3 construction, startup and initial commercial operation. In June 1997 I assumed
4 the position of General Manager, Technical Services in the Fossil/Hydro
5 Division of SCE&G. I report to the Vice President of Fossil & Hydro Operations.

6 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

7 **A.** The purpose of my testimony is to review the operating performance of
8 South Carolina Electric & Gas Company's fossil units and GENCO's Williams
9 Station during the period March 1, 1998, through February 28, 1999.

10 **Q. PLEASE GIVE A SHORT DESCRIPTION OF SCE&G'S FOSSIL AND**
11 **HYDROELECTRIC FACILITIES.**

12 **A.** SCE&G owns and operates fifteen (15) fossil fuel (coal and gas)
13 generating plants (including Williams Station) and six (6) hydroelectric
14 generating plants. The total net summer generating capability rating of these
15 facilities is 3,752 megawatts. A map showing all of SCE&G's generating
16 facilities (fossil, hydro, and nuclear) is attached to my testimony as Exhibit No.
17 _____ (GGS-1).

18 **Q. PLEASE EXPLAIN TO THE COMMISSION SOUTH CAROLINA**
19 **GENERATING COMPANY ("GENCO") AND ITS RELATIONSHIP TO**
20 **SCE&G.**

21 **A.** South Carolina Generating Company, Inc., ("GENCO") was incorporated
22 October 1, 1984. GENCO owns the Williams Electric Generating Station.

1 GENCO sells to SCE&G the entire capacity and output from the Williams
2 Station under a Unit Power Sales Agreement approved by the Federal Energy
3 Regulatory Commission.

4 **Q. HOW MUCH ELECTRICITY WAS GENERATED BY SCE&G IN THE**
5 **TWELVE MONTH REVIEW PERIOD?**

6 **A.** In the period under review, SCE&G generated 21,492,560 megawatt hours
7 of energy. Of this energy, 68.68% was generated by our fossil steam plants;
8 25.74% was generated by our nuclear plant; and 5.58% was generated by our gas
9 turbines and hydro facilities. (See Exhibit No. ____ (GGS-2).

10 **Q. PLEASE SUMMARIZE THE PERFORMANCE OF THE FOSSIL UNITS.**

11 **A.** Overall, SCE&G's fossil units have operated successfully in the twelve
12 month period ending on February 28, 1999. During the period we reached a
13 1998 summer peak of 3,935 MWs for our system (July 9, 1998). Power for this
14 peak was produced by the use of all of our plants.

15 **Q. PLEASE DISCUSS SCE&G'S OUTAGES FOR THE PERIOD UNDER**
16 **REVIEW.**

17 **A.** SCE&G experienced some planned outages during the review period.
18 These outage periods were utilized to improve our facilities and their
19 efficiencies, thereby benefiting our customers and the Company.

20 During Spring 1998, new Low Nox burner technology was installed at
21 Wateree Unit #2 and Urquhart #3. This technology is utilized by SCE&G in an
22 ongoing effort to prepare our plants for meeting Clean Air Act requirements.

1 SCE&G also overhauled HP and LP turbines at these plants. In Fall 1998, the
2 Low Nox burners were installed at McMeekin Station Unit #2 and Williams
3 Station, and then at Canadys #2 in February 1999. Canadys additionally received
4 new boiler tubing, upgrades to its #2 electrostatic precipitator, and routine
5 maintenance to its turbine. Williams also received a new high pressure steam
6 rotor and new boiler reheater tubing.

7 Other improvements and maintenance performed by SCE&G in the review
8 period include installation of a baghouse, new boiler tubing, and a new #3
9 cooling tower at Canadys #2; and replacement of cooling tower fill and new
10 particulate controls at Canadys #1.

11 In addition to the work described above, SCE&G implemented the
12 necessary changes to the plant controls to correct any discovered Y2K
13 deficiencies.

14 SCE&G experienced a low system forced outage rate of 2.89% in the
15 review period. "Forced outage rate" is the percentage of the total hours that
16 generating units are forced out of service (for various reasons) compared with the
17 total hours in service for the period. The North American Electric Reliability
18 Council ("NERC") national average forced outage rate for similarly sized units is
19 4.83%.

20 SCE&G had an availability of its fossil plants of 82.84% for the review
21 period. Availability is a measure of the actual hours that the generation units are
22 available compared with the total hours in the 12 month review period.

1 Availability is an indication of overall performance by a generation plant since it
2 is not affected by how the unit is dispatched or by the demand from the system.
3 NERC averages from 1993 to 1997 for availability from similar sized pulverized
4 coal fired units were 85.92%.

5 SCE&G's fossil plant availability was affected by our installation of the
6 Low Nox burners and other environmental improvements made during the
7 review period.

8 **Q. WHAT HAS BEEN THE HEAT RATE OF THE FOSSIL UNITS DURING**
9 **THE REVIEW PERIOD?**

10 **A.** Heat Rate is a measurement of the thermal efficiency of a power plant fuel
11 cycle. It is the number of British Thermal Units ("BTUs") of fuel required to
12 generate one (1) kilowatt hour of electricity.

13 For the period March 1, 1998, through February 28, 1999, the overall heat
14 rate for fossil plants on SCE&G's system was 9647 BTU/KWH. Cope Station
15 was our most efficient plant posting an overall 9216 BTU/KWH heat rate for the
16 period. These are quite good heat rates for these plants and indicate highly
17 efficient operations which means low coal consumption and reduced cost for our
18 customers.

19 **Q. IN OPERATING ITS FOSSIL AND HYDRO PLANTS, HAS SCE&G**
20 **TAKEN ALL REASONABLE STEPS TO MINIMIZE THE FUEL COST**
21 **TO CUSTOMERS?**

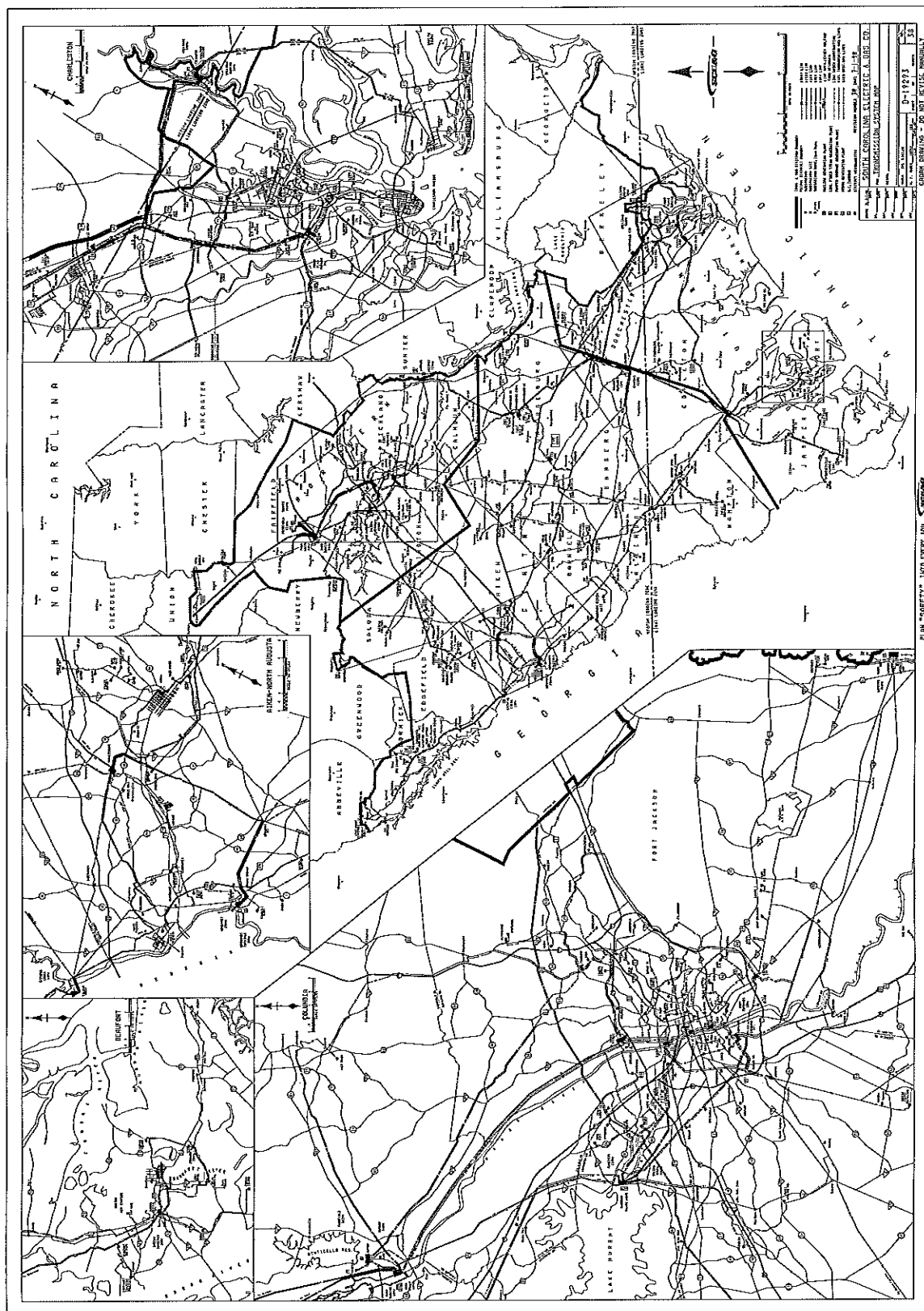
1 **A.** Yes. SCE&G has operated these plants as efficiently and reliably as is
2 reasonably possible. By doing so, we have held our customers' costs, including
3 fuel costs, to a minimum.

4 We are fortunate that we have had a low forced outage rate and a very low
5 heat rate during this period. Such favorable results will not always be possible.
6 Even with every reasonable effort by the Company to prevent them, equipment
7 problems and human error may cause outages and availability problems from
8 time to time, and simply are an expected part of utility operations.

9 SCE&G will continue to make every reasonable effort to minimize
10 operating problems. We are very proud of the results we have achieved during
11 the review period.

12 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

13 **A.** Yes.



South Carolina Electric & Gas 1998 Generation Mix

